

HUMAN PLASMA HYALURONIDASE

ABSTRACT OF THE DISCLOSURE

The invention is based on the discovery of methods for purification of an acid  
5 active hyaluronidase found in human plasma (hpHase), including both biochemical and  
immunoaffinity purification methods. The method of immunoaffinity purification of the  
invention is based on the discovery of a method for identifying antibodies that  
specifically bind native hpHase (anti-native hpHase antibodies), and anti-native  
hpHase antibodies identified by this screening method. The invention also features an  
10 assay for sensitive detection of Hase activity using biotinylated hyaluronic acid (bHA).  
Purification and characterization of hpHase lead to the inventors' additional discovery  
that hpHase is encoded by the LuCa-1 gene, which gene is present in the human  
chromosome at 3p21.3, a region associated with tumor suppression. The invention  
additionally features methods of treating tumor-bearing patients by administration of  
15 hpHase and/or transformation of cells with hpHase-encoding DNA.